Innovation and Informationization Reform of Japanese Teaching Mode under Big Data Environment

Li Zhang

Nanjing Normal University Zhongbei College, Nanjing, 210046, China

Abstract: In the process of information technology innovation, the Japanese education level of colleges and universities should adapt to the development of the times to integrate excellent technology and knowledge into the curriculum, fundamentally promoting the growth of students. In the current context of the big data era, Japanese teaching in Chinese universities has gradually integrated the advantages of intellectualization, informatization and rapidity of big data network, and strived to maintain the advanced level of modern quality education and skill education. Therefore, the impact of big data on traditional education models has emerged. The previous education model can no longer meet the requirements of the actual level of knowledge and skills in the development of the times. The traditional education model generally cannot meet the students' knowledge needs and cultivate their own abilities. This paper discusses the necessity of changing the traditional teaching mode of Japanese in the information age, and the problem how to promote the integration of information technology and Japanese teaching. Besides, it explores the application of big data resources and the new direction of educational reform to improve students' learning quality and Japanese learning standards.

Keywords: Big data; Information technology; Japanese teaching; Innovation and reform

1. Introduction

The gradual integration of information technology from its production to its application into daily life has helped the deal with dilemma of modern management. The development of information technology makes it possible for people to create greater value for talents who use technology and achieve innovative development. Relevant studies show that the world's information data has changed its capacity requirements through a rapid process. The background of big data will bring about a qualitative leap in people's mind and decision-making, and will affect the process of human development. In the context of big data, people's business model, business strategy, business philosophy, production attitude and mood are all affected. With the progress and maturity of information technology, big data technology has been widely used in colleges and universities. For example, teaching, with multimedia and electronic courseware, not only has the novel content and the relatively high efficiency, but also reduces the workload of teachers in classroom teaching. In the process of teaching, textbooks and teachers are the foundation, and there is no substantial change in the management and requirements of students. Although the network facilities and other hardware configurations of colleges and universities can basically satisfy the current teaching information construction, many informationized teaching methods have not been implemented, and the informationized thinking mode of teachers and students has not yet formed. The development and improvement of information technology has gradually changed people's learning ways and behavior habits. Through big data technology, college students can search any content on the internet. To a certain extent, it has changed the way students learn, and also provided some ideas for the teaching reform of colleges and universities courses [1]. In this context, it is obviously inappropriate for colleges and universities to still adopt the original teaching form. Moreover, the thinking way and learning state of college students are quite different from those in the past. It is necessary to reorganize students' learning mode and adopt acceptable ways and methods so as to achieve effective changes in teaching. In the process of education service, the management system of education industry also needs to be constantly improved. Nowadays, the society attaches great importance to the cultivation of talents. In many cases, education itself is not only to instill knowledge into students, but to stimulate their potential, so that students can learn to be interested in knowledge and produce a strong learning attitude because of their scientific enthusiasm. The reform of management system not only makes knowledge change from classroom to internet, but also requires students to explore knowledge and science, making informationization become a tool for supporting students' learning and life.

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2. The Necessity of Japanese Teaching Reform at the Information Age

In 2012, "China Education Informatization Development Report (2013)" made a general analysis of the current situation of China's education informatization development, pointing out that the application of information technology in teaching still needs to be deepened. The trend of educational informatization will be promoted by integration. Through integration, we can promote the reform of education and teaching. And integrating technology into education and teaching instead of simple application asks for deep integration of technology and subject content and the change of teaching methods. Because the traditional Japanese teaching method does not depend on multimedia information technology, it still exists under the impact of the internet trend with its unique advantages. Firstly, it systematizes language phenomena and makes it easier for learners to accept and understand the hierarchical processing of language from lower to higher levels. Secondly, it is advantageous to attach importance to vocabulary recitation and mechanical practice of sentence patterns. Teachers can only use simple teaching aids and students cannot improve their communicative competence.

Because of the continuous demand for high-quality talents, universities have launched universal education in an all-round way. More and more students are entering universities, which will certainly need more college counselors and managers. Different qualities of educators lead to different management abilities and related problems in management. However, not too much attention has been attached to the collection of such data in higher vocational colleges, which leads to the inability of higher vocational colleges to deal with such data well and the data cannot be collected by higher vocational colleges. The imperfection of data structure makes the poor effect of information collection and collation, resulting in the lack of advanced system of student management content. Colleges and universities cannot coordinate perfectly in the information operation management system, which makes the operation of educators more complex and busy, and also greatly delays the dissemination of information and data. It will be convenient for them to adjust their working ideas and start using big data in student information management, because at present they can only deal with some simple information and cannot analyze and process a large number of complex information data, which cannot achieve the effect of collecting, storing and analyzing information under big information data [2]. On the other hand, vocational college students are relatively free to learn and live, so it is difficult to obtain the needed information. In addition, for the analysis professionals, the data amount is very small, which increases the difficulty of introducing student information into data management of higher vocational colleges. Making use of big data in higher vocational colleges cannot give full play to its role.

3. The Role of Big Data in Japanese Teaching in Colleges and Universities

3.1. Providing individualized teaching model

Traditional teaching mode pays attention to the construction of subject knowledge system and the dominant position of teachers, and emphasizes one-way imparting knowledge in class. Although it solves the issue of training skilled talents, it cannot adapt to the situation of each learner, ignoring the individual needs of learners. Through big data, teachers can easily get the real information of each learner in school, so that they can customize the teaching content, methods and processes according to the learner's situation, such as the details of their characteristics, as well as their needs and quotations. Through tracking and collecting learners' big data in the way of guiding students' learning process, diagnosing students' learning achievements and so on, summarize and analyze their learning style and learning behavior from a large number of learners' relevant data. This can not only improve teachers' work efficiency and students' learning efficiency, but also realize teaching according to their own abilities and cultivate personalized innovative talents to meet the needs of the information age.

3.2. Constructing information-based teaching environment

With the help of big data, students can learn through self-learning platform. For example, flipping classroom and MOOCs have changed students' learning style, improved their learning enthusiasm and met their needs of personalized development. Students' learning process is no longer passive acceptance in the past, but needs personalized customized services and is a highly collaborative and comprehensive constructing activity. In the case of a large increase in learning resources, it is necessary to provide reasonable and feasible information services and effectively integrate a large number of learning information resources to promote the circulation and application of resources. In the information-based teaching environment, an important problem to be solved is how to help students quickly find the required learning materials in a large number of learning resources, and provide students with appropriate information. At present, it is often used for students to search for resources, but the more effective way is to push the target information to students.

3.3. Accurate analysis of learners' learning situation

Big data technology in education, through deep mining and big data analysis in education, teachers can quantify learners' learning process and learning state. They should not only pay attention to the identification of correlation,

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but also emphasize the determination of causality. In addition, the big data of education can also analyze the data generated by learners in the learning process, predict learners' learning level and learning ability, discover potential problems of learners, systematically improve the forms of school teaching and learning, and comprehensively improve the application of school information technology and teaching service level. It can not only show the deep learning state that traditional teaching methods cannot detect in detail, but also enable each student to learn independently according to their own learning situation.

3.4. Promoting the innovation and reform of educational management

The development of the information age is beyond imagination. For schools and educational institutions, it is necessary to use big data technology to achieve information management and innovation. In the traditional development process, it is difficult for educational administrators to dynamically monitor the education system, because they cannot master the comprehensive situation of teaching and management in time. The timely monitoring and management of university public opinion as well as the dynamic tracking of personnel inside and outside the university can be realized by integrating the results of data analysis. In the daily management and service of colleges and universities, it has become an important tool for college information management. It also detects and locates abnormal situations such as illegal intrusion and abuse of users. Through in-depth mining of a large number of log files data mining resources, it helps educational managers fully master the potential problems and threats, which can greatly enhance the security and protection capabilities of campus network system.

4. Reform of Integration of Information Technology and Japanese Teaching

China Education Informatization Development Report (2013) emphasizes the integration of technology into education and teaching rather than simple application. Therefore, information technology should be integrated with Japanese teaching process in an all-round and in-depth way to promote the reform of teaching methods.

4.1. Integration of information technology and teachers

Teachers in traditional Japanese classroom only need to teach students to use words and grammar rules or analyze difficult sentences in the text. Therefore, teachers do not need to have excellent oral expression ability. Nowadays, lifelong learning has become a fashion, and Japanese teachers urgently need to strengthen their professional ability, especially oral communication ability. The popularity of the internet can help teachers improve their pro-

fessional ability. Teachers can listen to Japanese news on Muchu website, watch public courses of their peers, interact with Japanese netizens on the forum and receive distance business training. Through the above internet activities, teachers can expand their existing knowledge and improve their professional level.

4.2. Integration of information technology and students

In addition to following the teacher in class, students can also use the network platform for autonomous learning after class. At the same time, the abundant resources on the internet have greatly increased students' learning freedom, such as browsing Japanese websites regularly, watching Japanese movies and TV animations, downloading e-books to read, completing and submitting homework by using the self-learning platform on the internet, etc.

4.3. Integration of information technology and teaching content

In the era of information technology, Japanese classroom presents the characteristics of multimedia textbooks and the globalization of resources. Teachers should recognize these characteristics in time, collect information selectively from the internet according to textbooks to expand the teaching content. Teachers can integrate network resources to write their own textbooks. They can choose part of NHK website as the content of listening course, several editorials as the content of extensive reading course. They can download the works of famous Japanese writers as the material of literature selective reading course, and choose Japanese documentaries as the content of interpretation course [3].

4.4. Integration of information technology and teaching method

Teachers should collect materials according to the teaching content, design teaching scenes in the teaching process using multimedia and related learning software, be good at using audio-visual and pictures in network resources to display teaching content, fully mobilize students' learning enthusiasm and attract students' interest. For example, when explaining Japanese words or in translating lessons, students can be encouraged to use online Japanese dictionaries in class, such as Yahoo! Dictionary, goo Mandarin dictionary, etc. When teaching Japanese history and culture, teachers can display pictures or play related scientific educational movies.

5. Conclusion

Learning from various levels and perspectives, although big data continue to penetrate into the field of education, compared with other industries, the development of big data in China's education is still in the preliminary ex-

ploratory stage, and on a larger scale. Data in education industry is relatively small at present. The application prospect of big data and modern information technology in college Japanese teaching is very broad. Therefore, while improving teachers' own teaching level, schools should broaden their horizons and apply more high-tech to Japanese teaching in order to meet the needs of the times. At the same time, in the process of teaching reform, colleges and universities should constantly improve the training plan and syllabus, improve and revise the old textbooks, construct a new teaching mode, mobilize students' learning enthusiasm, improve the quality of teaching and explore teaching.

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